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HEADER

R 160812Z MAR 92

FM JOINT STAFF WASHINGTON DC

INFO RUFGAID/USEUCOM AIDES VAIHINGEN GE

RHHMMCY/JICPAC HONOLULU HI

RUCIAEA/FTC WRIGHT PATTERSON AFB OH//SCIR//

RUCBSAA/USCINCLANT NORFOLK VA//J2//

RUWSMXI/MAC INTEL CEN SCOTT AFB IL//IN//

RUCQVAB/USCINCSOC INTEL OPS CEN MACDILL AFB FL

RUSNNOA/USCINCEUR VAIHINGEN GE

RUEALGX/SAFE

R 160754Z MAR 92

FM AMEMBASSY BEIJING

TO RUEHC/SECSTATE WASHDC 9807

INFO RUEHHK/AMCONSUL HONG KONG 1103

RUEHSH/AMCONSUL SHENYANG 4784

RUFHMB/USMISSION USVIENNA 0191

RHEBAAA/USDOE WASHDC

RUEKJCS/SECDEF WASHDC

RUESLE/AMCONSUL SHANGHAI 8547

RUEHUL/AMEMBASSY SEOUL 4929

RUEHMO/AMEMBASSY MOSCOW 1402

RUEADWW/WHITEHOUSE WASHDC

RUEHGZ/AMCONSUL GUANGZHOU 8707

RUEHKO/AMEMBASSY TOKYO 7764

RUFHNA/USMISSION USNATO 2866

RUEKJCS/DIA WASHDC

RUKGNFA/NRC WASHDC

RHEBAAA/USDOE WASHDC

RUCPDC/USDOC WASHDC

ZEN/AMCONSUL CHENGDU

BT

CONTROLS

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DEPT. FOR OES/SCT, OES/N, AND EAP/CM

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E.O. 12356: DECL: OADR

/***** THIS IS A COMBINED MESSAGE *****/

BODY

TAGS: KSCA, TRGY, ENRG, CH

SUBJECT: CHINA'S EXTENDED NUCLEAR FAMILY

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Dept. of State, RPS/IPS, Margaret P. Grafeld, Dir.

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REF: A.) GUANGZHOU 00829
- B.) BEIJING 02918
- C.) BEIJING 02917
- D.) 91 SHENYANG 148
- E.) 90 BEIJING 25856

1. CONFIDENTIAL - ENTIRE TEXT

2. SUMMARY: THE STRUCTURE OF CHINA'S NUCLEAR TECHNOLOGY R&D ESTABLISHMENT REMAINS LOOSELY ORGANIZED [

] BUT CONTINUES TO MAKE SIGNIFICANT PROGRESS IN DEVELOPING ITS NUCLEAR REACTOR TECHNOLOGY. THE STATE COUNCIL'S NUCLEAR LEADING GROUP STANDS AT THE TOP OF CHINA'S NUCLEAR ESTABLISHMENT, SUPERVISING THE CHINA NATIONAL NUCLEAR CORPORATION (CNNC). HOWEVER, ASIDE FROM CNNC, MANY OTHER ORGANIZATIONS CONDUCT RESEARCH, AND THE BUREAUCRATIC HIERARCHIES DO NOT INTERSECT UNTIL THEY REACH THE STATE COUNCIL, REFLECTING A LACK OF COORDINATION AT THE WORKING LEVEL. MOREOVER, TWO PROVINCES ARE PREPARING TO ENTER THE NUCLEAR POWER GAME APPARENTLY OUTSIDE THE DIRECT CONTROL OF CNNC; THE MILITARY CONTINUES TO EXERT SOME AUTHORITY IN THE CIVILIAN NUCLEAR RESEARCH ESTABLISHMENT; [

SUMMARY.

] END

NUCLEAR LEADING GROUP: CONTROL AT THE TOP

3. AT THE TOP OF CHINA'S NUCLEAR INDUSTRY PYRAMID STANDS THE STATE COUNCIL'S NUCLEAR POWER LEADING GROUP, HEADED BY VICE-PREMIER ZOU JIAHUA. THIS ORGANIZATION STEERS THE ACTIVITIES OF THE CHINA NATIONAL NUCLEAR CORPORATION (CNNC), WHICH IN TURN CONSTITUTES THE PRIMARY AGENCY INVOLVED IN DEVELOPING CHINA'S NUCLEAR INDUSTRY. THE LEADING GROUP ALSO SUPERVISES THE NATIONAL NUCLEAR SAFETY AGENCY (NNSA), A REGULATORY BODY MODELED AFTER THE U.S.'S NRC.

LOOSER ORGANIZATION AT THE WORKING LEVEL

4. HOWEVER, THE LEADING GROUP DOES NOT EXERT EXCLUSIVE AUTHORITY OVER CHINA'S ENTIRE NUCLEAR COMPLEX. ASIDE FROM CNNC A NUMBER OF ORGANIZATIONS RUN PROGRAMS THAT INVOLVE NUCLEAR TECHNOLOGY;

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INCLUDING THE STATE EDUCATION COMMISSION, THE CHINESE ACADEMY OF SCIENCES (CAS), AND THE STATE SCIENCE AND TECHNOLOGY COMMISSION (SSTC). THESE AGENCIES REPRESENT ESTABLISHED BUREAUCRACIES THAT REPORT TO THE STATE COUNCIL IN ITS CAPACITY AS THE EXECUTIVE BRANCH OF THE GOVERNMENT, BUT DO NOT NECESSARILY COORDINATE NUCLEAR ACTIVITIES THROUGH THE LEADING GROUP OR WITH EACH OTHER. THE STATE COUNCIL SERVES AS THE MEETING POINT FOR ALL BUREAUCRATIC HIERARCHIES, PROVIDING A MECHANISM FOR COORDINATION AT THE VERY HIGHEST LEVEL OF THE GOVERNMENT, BUT DOES NOT CONSTITUTE A FACILE COORDINATING BODY AT THE WORKING LEVEL.

5. CNNC ITSELF SERVES A NUMBER OF MASTERS. THE NUCLEAR LEADING GROUP HANDLES ISSUES OF PERSONNEL AND FINANCES. CNNC REPORTS TO THE MINISTRY OF ENERGY (MOE) FOR ISSUES RELATING TO ENERGY, BUT SOURCES STRESS THE MOE HAS LIMITED RESPONSIBILITY FOR CHINA'S NUCLEAR INDUSTRY. CNNC ALSO HAS A CLOSE RELATIONSHIP WITH THE COMMISSION FOR SCIENCE, TECHNOLOGY, AND INDUSTRY FOR NATIONAL DEFENSE (COSTIND), THE S&T ARM

/***** BEGINNING OF SECTION 002 *****/
OF THE MILITARY.

THE CNNC - MILITARY RELATIONSHIP

6. IN FACT, A SOURCE AT COSTIND BOASTED THAT COSTIND IS RESPONSIBLE FOR ALL NUCLEAR TECHNOLOGY DEVELOPMENT, CIVILIAN AND MILITARY. CNNC DENIES THIS CLAIM, INSISTING THAT CNNC'S CONTACT WITH COSTIND REMAINS LIMITED TO MILITARY TECHNOLOGY, AND THAT THIS RELATIONSHIP HAS DECREASED SINCE 1988, THE YEAR THE INDUSTRY WAS REORGANIZED. HOWEVER, AS A CONTACT AT THE STATE SCIENCE AND TECHNOLOGY COMMISSION PUT IT, WHEN COSTIND GIVES FUNDS TO INSTITUTIONS FOR RESEARCH IT DEMANDS CONTROL OF THE PROGRAM IN RETURN, WHILE SSTC, CHINA'S CIVILIAN TECHNOLOGY AGENCY, MERELY ASKS FOR PROGRESS REPORTS.

CNNC'S DOMAIN

7. CNNC CONTROLS A SIGNIFICANT NUCLEAR EMPIRE. CNNC IS RESPONSIBLE FOR THE QINSHAN AND DAYA BAY NUCLEAR REACTOR PROJECTS. CNNC ALSO CLAIMS CONTROL OVER THE NUCLEAR FUEL CYCLE IN CHINA, FROM EXPLORATION TO FUEL

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PRODUCTION. HOWEVER, HEAVY WATER PRODUCTION IS HANDLED BY THE MINISTRY OF CHEMICAL INDUSTRY. CNNC SUPERVISES A NUMBER OF INSTITUTES, INCLUDING THE CHINA INSTITUTE OF ATOMIC ENERGY (CIAE), THE PRODUCER OF RESEARCH REACTOR TECHNOLOGY SOLD TO ALGERIA, PAKISTAN AND IRAN; THE SHANGHAI NUCLEAR ENGINEERING RESEARCH AND DEVELOPMENT INSTITUTE, WHICH DESIGNED QINSHAN; AND THE SOUTHWEST CENTER FOR REACTOR ENGINEERING RESEARCH AND DESIGN IN CHENGDU. CNNC ALSO POSSESSES AN IMPORT EXPORT COMPANY, THE CHINA NUCLEAR ENERGY INDUSTRY CORPORATION, AND A CONSTRUCTION COMPANY, THE CHINA ZHONGYUAN ENGINEERING COMPANY, WHICH ARE CURRENTLY PLANNING TO CONSTRUCT A 300 MW NUCLEAR POWER PLANT IN PAKISTAN.

OTHER PLAYERS

8. CNNC, HOWEVER, DOES NOT HAVE EXCLUSIVE RIGHTS TO NUCLEAR RESEARCH IN CHINA. QINGHUA UNIVERSITY CONTAINS AN INSTITUTE FOR NUCLEAR ENERGY TECHNOLOGY (INET) AT A CAMPUS NORTH OF BEIJING. THIS INSTITUTE HAS DEVELOPED A PROTOTYPE 5 MW DISTRICT HEATING NUCLEAR REACTOR. SCIENTISTS AT INET ARE PREPARING TO MOVE THEIR NUCLEAR TECHNOLOGY OUT OF THE LABORATORY AND INTO THE MARKET PLACE; REPORTEDLY THEY WILL BUILD A HEATING REACTOR IN JILIN PROVINCE. INET REPORTS THROUGH QINGHUA UNIVERSITY TO THE STATE EDUCATION COMMISSION.

9. THE CHINESE ACADEMY OF SCIENCES (CAS) ALSO PARTICIPATES IN NUCLEAR RESEARCH. THE SHANGHAI NUCLEAR SCIENCE AND TECHNOLOGY RESEARCH INSTITUTE, NOW RUN BY CAS, WAS ORIGINALLY PART OF THE NOW DEFUNCT SECOND INDUSTRIAL MACHINERY MINISTRY, BUT WAS SEPARATED DURING THE CULTURAL REVOLUTION. THE INSTITUTE POSSESSES AN ACCELERATOR AND CONDUCTS RESEARCH ON RADIOACTIVE ISOTOPES.

NUKE SAFETY RESPONSIBILITY: WEAK AND DIVIDED

10. THE NATIONAL NUCLEAR SAFETY AGENCY (NNSA) HOLDS

/***** BEGINNING OF SECTION 003 *****/
REGULATORY RESPONSIBILITY FOR NUCLEAR SAFETY IN CHINA. IN THIS REGARD, NNSA SUPERVISES THE SAFETY FEATURES OF QINSHAN AND DAYA BAY, IN COOPERATION WITH CNNC. NNSA MODELS ITSELF AFTER THE U.S.'S NRC, AND A

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NUMBER OF NNSA ADMINISTRATORS HAVE SPENT TIME AT THE NRC UNDER THE AUSPICES OF THE U.S./PRC NUCLEAR SAFETY PROTOCOL. ALTHOUGH THE NNSA REPORTS DIRECTLY TO THE NUCLEAR POWER LEADING GROUP OF THE STATE COUNCIL, IT ALSO "CONSULTS" WITH THE STATE SCIENCE AND TECHNOLOGY COMMISSION (SSTC). THE NATIONAL ENVIRONMENTAL PROTECTION AGENCY (NEPA), [] INVOLVES ITSELF IN SOME ASPECTS OF NUCLEAR SAFETY BY PREPARING ENVIRONMENTAL IMPACT STUDIES FOR NUCLEAR POWER PLANTS.

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11. A COMMUNITY RESPONSE PLAN FOR A NUCLEAR ACCIDENT CONSTITUTES ONE PART OF A REACTOR'S NUCLEAR SAFETY PROGRAM. HOWEVER, NNSA DOES NOT POSSESS AUTHORITY FOR THIS TYPE OF PLANNING. RESPONSIBILITY FOR THE COST OF PLANNING FOR A NUCLEAR EMERGENCY APPARENTLY REMAINS A TOPIC OF CONTENTION BETWEEN THE CENTRAL AND LOCAL GOVERNMENTS IN QINSHAN AND DAYA BAY. THE LACK OF COORDINATION ON THIS FRONT REPORTEDLY IS TO BLAME FOR THE CONTINUED ABSENCE OF A EMERGENCY RESPONSE PLAN FOR QINSHAN, ALTHOUGH THE REACTOR STARTED UP DECEMBER 15.

12. NNSA ALSO DOES NOT EXERT SUPERVISORY CONTROL OVER CHINA'S MILITARY NUCLEAR INSTALLATIONS. WHILE IN THE U.S. FOR TRAINING, A NNSA CONTACT RECEIVED AN EXTENSIVE BRIEFING ON THE ONGOING CLEAN-UP OF NUCLEAR WEAPONS PLANTS IN THE U.S. HOWEVER, THE NNSA OFFICIAL TOLD US, HE CANNOT APPLY THIS KNOWLEDGE IN CHINA DUE TO HIS AGENCY'S INABILITY TO INTERFERE WITH THE MILITARY, EVEN IN MATTERS PERTAINING TO NUCLEAR SAFETY.

PROVINCIAL PLAYERS

13. AS RECENTLY REPORTED REF A, AND CONFIRMED BY CNNC, THE GUANGDONG POWER AUTHORITY IS CURRENTLY PLANNING TO CONSTRUCT AND OPERATE A NUCLEAR POWER PLANT SEPARATE FROM THE DAYA BAY PROJECT. APPARENTLY, THE PROVINCIAL GOVERNMENT, AND NOT CNNC, WILL RUN THIS PLANT. A CNNC OFFICIAL COMMENTED THAT GUANGDONG IS RAISING THE MONEY AND THE POWER PLANT THEREFORE BELONGS TO THE PROVINCE. HE ADDED THAT CNNC WILL BE INVOLVED, ALTHOUGH HE WOULD NOT SPECIFY IN WHAT CAPACITY.

14. APPARENTLY, ACCORDING TO OUR SOURCE, ANY PROVINCE WITH THE FINANCIAL WHEREWITHAL CAN PLAN FOR

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A NUCLEAR REACTOR. ASIDE FROM THE QUESTION OF FINANCES, WHICH LIMITS THE OPTION TO THE RICHEST PROVINCES, OBTAINING THE CENTRAL GOVERNMENT'S, AND NOT NECESSARILY CNNC'S, APPROVAL PRESENTS THE ONLY MAJOR OBSTACLE TO ESTABLISHING A PROVINCIAL NUCLEAR POWER PLANT.

15. THE CENTRAL GOVERNMENT HAS REPORTEDLY APPROVED FUNDING FOR A 200 MW HEATING REACTOR FOR JILIN PROVINCE (REFS B AND D) BASED ON INET'S PROTOTYPE REACTOR. HOWEVER, AN INET PROFESSOR STATED THAT BECAUSE THIS REACTOR WILL PRODUCE HEAT AND NOT ELECTRICITY THE PROJECT WILL NOT BE HANDLED BY CNNC. INET AND JILIN PROVINCE WILL COOPERATE ON THE PROJECT, APPARENTLY CUTTING CNNC OUT OF THE DEAL.

/***** BEGINNING OF SECTION 004 *****/
LACK OF FOCUS CAUSES DELAYS, BUT NUCLEAR PROGRAM
MOVES FORWARD

16. THE LOOSE ORGANIZATION OF CHINA'S NUCLEAR ENERGY INDUSTRY MAY BEAR PARTIAL RESPONSIBILITY FOR CHINA'S DELAYED DEVELOPMENT OF CIVILIAN NUCLEAR POWER PLANTS. DAYA BAY'S COMPLETION DATE HAS BEEN POSTPONED DUE TO CONSTRUCTION DELAYS, WHICH SOURCES HAVE ATTRIBUTED IN PART TO BUREAUCRATIC INFIGHTING (AS WELL AS SHODDY WORKMANSHIP). THE (FORMER) MINISTRY OF NUCLEAR INDUSTRY AND THE MUNICIPALITY OF SHANGHAI ORIGINALLY PROPOSED CONSTRUCTION OF A 10 MW REACTOR IN EAST CHINA IN SEPTEMBER 1966. IN 1972, THE NUCLEAR LEADING GROUP PROPOSED A 300 MW REACTOR FOR SHANGHAI, YET GROUND WAS NOT BROKEN FOR QINSHAN UNTIL JUNE 1983, NEARLY 17 YEARS AFTER IT WAS ORIGINALLY PROPOSED, AND THE REACTOR DID NOT START OPERATING UNTIL DECEMBER 1991.

17. ALTHOUGH THE TECHNOLOGIES ARE NOT IDENTICAL, ONE SOURCE CONTRASTED CHINA'S DEVELOPMENT OF NUCLEAR WEAPONS TO ITS NUCLEAR ENERGY PROGRAM: CHINA BEGAN DEVELOPING ITS ATOMIC BOMB IN THE MID-1950'S, AND SUCCESSFULLY TESTED IT IN 1964. CHINA'S FIRST PRODUCTION REACTOR FOR THE MILITARY WAS COMPLETED IN 1966, 25 YEARS BEFORE THE COMPLETION OF ITS FIRST CIVILIAN NUCLEAR POWER PLANT. CHINA'S PUSH TO DEVELOP ITS CIVILIAN NUCLEAR CAPABILITY DOES NOT BOAST THE INTENSITY OR BUREAUCRATIC FOCUS THAT PROPELLED THE EFFORT TO BUILD A NUCLEAR WEAPON.

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18. HOWEVER, ONE CANNOT OVERLOOK THE TANGIBLE
SUCCESSSES IN CHINA'S NUCLEAR ENERGY PROGRAM. CHINA
POSSESSES FUEL FABRICATION AND HEAVY WATER TECHNOLOGY
AND IS WORKING ON LASER ENRICHMENT OF URANIUM AND
FAST BREEDING REACTOR TECHNOLOGY. DESPITE DELAYS,
QINSHAN AND DAYA BAY ARE MOVING FORWARD, AND CHINA
PLANS FOR ADDITIONAL REACTORS AT QINSHAN AND IN
GUANGDONG. ALTHOUGH CHINA'S NUCLEAR POWER PROGRAM
STARTED SLOWLY, IT ACCELERATED IN THE 1980'S. THIS
IN PART STEMMED FROM A HIGHER PRIORITY GIVEN NUCLEAR
POWER BY THE CENTRAL GOVERNMENT, AND IN PART BY THE
ACCESS CHINA HAD TO THE NECESSARY FOREIGN TECHNOLOGY
AFTER 1978. AS ONE FOREIGN SCIENTIST CLOSE TO
CHINA'S NUCLEAR INDUSTRY PUT IT, "CHINA'S NUCLEAR
INDUSTRY IS SCATTERED AND IT SEEMS NO ONE KNOWS
WHAT'S GOING ON, BUT EVERY SO OFTEN THEY SURPRISE US
WITH HOW ADVANCED THEIR NUCLEAR TECHNOLOGY REALLY
IS." ROY

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